



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/753,495	01/09/2004	Jin Woong Kim	2832-0173P	6825
2292 7590 01/05/2007 BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			EXAMINER HECKERT, JASON MARK	
			ART UNIT	PAPER NUMBER
			1746	
SHORTENED STATUTORY PERIOD OF RESPONSE		NOTIFICATION DATE	DELIVERY MODE	
3 MONTHS		01/05/2007	ELECTRONIC	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 01/05/2007.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary	Application No.	Applicant(s)	
	10/753,495	KIM ET AL.	
	Examiner	Art Unit	
	Jason Heckert	1746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>6/02/06 and 6/30/05</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-17 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
3. Claim 1 recites the limitation "the steam tube" in line 24. There is insufficient antecedent basis for this limitation in the claim. Please revise the claim clearly defining the invention.
4. Claim 15 is confusing, in that it is not clear how the "through-holes" allow wash water to flow between the tub and drum when both the tub and drum are outside the steam generating apparatus in which the "through-holes" are contained. Please revise the claim clearly defining the invention.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

6. Claims 1-2, 5-7, 16 rejected under 35 U.S.C. 102(a) as being anticipated by Nakamura et al. Nakamura et al. discloses a standard washing machine with standard

Art Unit: 1746

components such as a housing, a tub, and a drum as seen in figure 1. Nakamura et al. also discloses a water-supply unit comprising a valve 17 and a water supply tube 16 connecting the valve to an inlet of container 6. Said container has a boiler 7 and a cylindrical outlet tube 8 with an upper end disposed at an upper part of the container and a lower end disposed outside the container. This upper part of the container protrudes from the lower part and, considering steam rises, a portion of this upper part will store steam before it leaves the container. Furthermore, if steam is to travel through tube 8, then the tube must be fixed to the container at a location in correspondence with the steam storing part. Finally tube 8 is connected to a nozzle 20 that delivers steam to the laundry, which is a functional equivalent of a steam tube. This steam generation unit is located above the tub between the tub and the casing.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claim 3 rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura et al. in view of the admitted state of the art (ASA). Nakamura et al. does not disclose a detergent box or a pipe associated with a detergent box. Applicant has disclosed that detergent boxes are well known in the prior art for supplying detergent to a tub (Specification lines 5-10). Furthermore, duplication of parts was held to have been

Art Unit: 1746

obvious. *St. Regis Paper Co. v. Beemis Co. Inc.* 193 USPQ 8, 11 (1977); *In re Harza* 124 USPQ 378 (CCPA 1960). Including another pipe from the inlet valve to a detergent box is nothing more than duplication of tube 16. It would have been obvious at the time of the invention, to modify the machine disclosed by Nakamura et al. by including a detergent box with a unique water supply tube as taught by the ASA, in order to allow the proper amount of wash fluid to enter the tub while still having the benefits of steam cleaning.

9. Claim 4 rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura et al. in view Chang. Nakamura et al. does disclose the steam tube being located in the upper end of the tub for delivering steam but does not disclose a gasket for preventing leakage of water between the tub and the casing. Chang discloses a gasket 35 for preventing leakage from tub 5. Furthermore, gaskets are notoriously well known in the art, and simply including them for their conventional use cannot be considered novel. It would have been obvious at the time of the invention to modify Nakamura et al. and include a gasket as taught by Chang for preventing leakage. It would also be obvious for the steam supply to penetrate this gasket in some regard, otherwise the steam generator would not be able to perform its intended function of delivering steam to the tub, a function disclosed by Nakamura et al.

10. Claims 8-9 rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura et al. in view of Sloan et al. and further in view of Wang. Nakamura et al. does not disclose a submerged heating element. Sloan et al. discloses a steam generator with an electric heating element 14 disposed in such a fashion that even at a

Art Unit: 1746

minimum water level, proper heating takes place. Heating coils are notoriously well known in the art. Wang also discloses a steam generator with a slightly different arrangement, in which heating coil 14 is at the bottom of the boiler 11, but not below a conductive material like Sloan et al. It would have been obvious at the time of the invention, to modify Nakamura et al. and arrange an electric heating coil at the bottom of the boiler, as taught by Sloan et al. and Wang, in order to allow water to boil even at its minimum level.

11. Claim 10 rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura et al. in view of Pick. Nakamura et al. does not disclose the inlet valve being controlled by solenoids. Solenoid valves are notoriously well known in the art and their use cannot be considered novel. Pick discloses an inlet valve of a washing machine that is operated by solenoids. It would have been obvious at the time of the invention to modify Nakamura et al. and provide a solenoid inlet valve, as taught by Pick, so that the valve can be controlled electrically.

12. Claim 11 rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura et al. in view of Aksenov et al. Nakamura et al. does not disclose a temperature sensor in the boiler. Aksenov et al. disclose an electrically heated steam generator with control 40 and temperature sensor 41. Furthermore, temperature control is notoriously common in the art. It would have been obvious at the time of the invention to modify Nakamura et al., and include a temperature sensor with associated control elements as taught by Aksenov et al., in order to control the temperature of the temperature inside the boiler.

Art Unit: 1746

13. Claim 12 rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura et al. in view of Tsutsumi. Nakamura et al. does not disclose a blower or fan in the outlet tube. The applicant does not clearly show how a blower would be included in said apparatus. However, the use of a blower or fan is notoriously well known in the art for the purpose of driving steam out of the generator. Tsutsumi discloses such a fan 12 for driving steam out of a steam generator. It would have been obvious, at the time of the invention to modify Nakamura et al. and include a blower near the outlet of the generator, as taught by Tsutsumi, in order to force steam out of the generator.

14. Claims 13-15 rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura et al. in view of Glucksman. Nakamura does not disclose a wash-water flow restraining unit mounted in the container. Various known methods for restraining, or controlling fluid flow, are known in the art from simple float valves to elaborate processes involving detection and control schemes. Any of these would read on "flow restraining unit". Glucksman discloses a water control means involving partitions in figure 3. Chamber 30 extends down to just above the bottom of tray 42, like partition 1 of the claimed invention. Outside of chamber 30 exists another wall surrounding the walls of 30, so as to divide the chamber into different water holding areas, each of uniform level. Finally, a passage exists below the wall of chamber 30 for allowing water to flow from one compartment to the other. This is equivalent to a "through-hole". It would have been obvious at the time of the invention, to modify Nakamura et al. and include partitions, as taught by Glucksman, in order to maintain proper water level in the apparatus.

Art Unit: 1746

15. Claim 17 rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura et al. Nakamura et al. discloses the steam generation unit as being located above the tub and between the tub and the casing. He does not disclose it below the tub between the tub and the casing. Rearrangement of parts was held to have been obvious. *In re Japikse* 86 USPQ 70 (CCPA 1955). It would have been obvious at the time of the invention to modify Nakamura et al. and alter the location of the steam generator to fit different design parameters.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason Heckert whose telephone number is (571) 272-2702. The examiner can normally be reached on Mon. to Friday, 8:00 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Barr can be reached on (571)272-1414. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1746

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JMH

MICHAEL KORNAKOV
PRIMARY EXAMINER

M. KORNAKOV

12/26/06